

**Amendments to the claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of claims:**

Claims 1-65 (canceled)

66. (New) Synthetic peptides in linear form, or cyclized by means of inter-cysteine disulphide bridges, having the general formula (I):



wherein:

-  $\Delta$  is selected from the group consisting of a biotinyl radical, a biocytinyl radical, a hydrogen atom, an acetyl ( $\text{CH}_3\text{CO-}$ ) radical, an aliphatic chain which may contain one or two thiol, an aldehyde functional group and an amine functional group,

- Z is a peptide sequence selected from the group consisting of:

Leu Leu Ser Ser (various regions of SEQ ID NOS 3, 4, 8 and 9, respectively),

Leu Leu Asn Ser (various regions of SEQ ID NOS 6, 10, 11, 14, 15 and 20, respectively),

Arg Leu Asn Ser (a region of SEQ ID NO: 16),

Ala Leu Glu Thr Lu Leu Gln Asn Gln Gln Leu Leu Asn Ser (a region of SEQ ID NO: 11),

Ala Leu Glu Thr Leu Leu Gln Asn Gln Gln Leu Leu Asp Leu (a region of SEQ ID NO: 13),

Ala Leu Glu Thr Leu Leu Gln Asn Gln Gln Leu Leu Asn Ile (a region of SEQ ID NO: 12),

Leu Asn Gln Gln Arg Leu Leu Asn Ser (various regions of SEQ ID NOS 14, 15, & 20, respectively), and

Arg Ala Leu Glu Thr Leu Leu Asn Gln Gln Arg Leu Leu Asn Ser (a region of SEQ ID NO: 15),

-  $\Theta$  is a peptide sequence selected from the group consisting of:

Arg Gly Arg Leu Val (various regions of SEQ ID NOS 2, 8, 11, 12 and 13, respectively),

Arg Gly Lys Leu Ile (SEQ ID NO: 17),

Arg Gly Lys Leu Val (SEQ ID NO: 18), and

Lys Gly Arg Leu Val (various regions of SEQ ID NOS 3, 4, 5, 9, 10, 15 and 16, respectively),

-  $\Omega$ , attached to the -CO- group of Ser, is selected from the group consisting of:

a hydroxyl group and

a peptide sequence of formula

Val -  $\Psi$ ,

Val Arg Trp Asn Glu Thr- $\Psi$  (various regions of SEQ ID NOS 11, 12, and 13, respectively),

Val Gln Trp Asn Glu Thr- $\Psi$  (various regions of SEQ ID NOS 1, 2, 3, 6, 7 and 8, respectively), and

Val Gln Trp Asn Ser Thr- $\Psi$  (various regions of SEQ ID NOS 4 and 5, respectively), wherein  $\Psi$ , attached to the -CO- residue of Val or Thr, is selected from the group consisting of a OH group, a NH<sub>2</sub> group, and an alkoxy radical comprising from 1 to 6 carbon atoms.

67. (New) Synthetic peptides of formula (I) according to claim 66 wherein  $\Delta$  represents an aliphatic chain, said aliphatic chain being selected from the group consisting of an alkyl chain of 1 to 6 carbon atoms, an alkenyl chain of 2 to 6 carbon atoms, and an aminoalkylcarbonyl chain of 2 to 6 carbon atoms.

68. (New) Synthetic peptides of formula (I) according to claim 66 including one of the following sequences:

LLSLWGCRGRLVCYTSVQWNET

or

Leu Leu Ser Leu Trp Gly Cys Arg Gly Arg Leu Val Cys Tyr Thr Ser Val Gln Trp Asn

1                      5                      10                      15                      20

Glu Thr (SEQ ID NO: 2),

22

LLSSWGCKGRLVCYTSVQWNET

or

Leu Leu Ser Ser Trp Gly Cys Lys Gly Arg Leu Val Cys Tyr Thr Ser Val Gln Trp Asn  
1 5 10 15 20  
Glu Thr (SEQ ID NO: 3),  
22

LLSSWGCKGRLVCYTSVQWNST

or

Leu Leu Ser Ser Trp Gly Cys Lys Gly Arg Leu Val Cys Tyr Thr Ser Val Gln Trp Asn  
1 5 10 15 20  
Ser Thr (SEQ ID NO: 4),  
22

LLQSWGCKGRLVCYTSVQWNST

or

Leu Leu Gln Ser Trp Gly Cys Lys Gly Arg Leu Val Cys Tyr Thr Ser Val Gln Trp Asn  
1 5 10 15 20  
Ser Thr (SEQ ID NO: 5),  
22

LLSSWGCRGRLVCYTSVQWNET

or

Leu Leu Ser Ser Trp Gly Cys Arg Gly Arg Leu Val Cys Tyr Thr Ser Val Gln Trp Asn  
1 5 10 15 20  
Glu Thr (SEQ ID NO: 8),  
22

LLSSWGCKGRLVCYTS

or

Leu Leu Ser Ser Trp Gly Cys Lys Gly Arg Leu Val Cys Tyr Thr Ser (SEQ ID NO: 9),  
1 5 10 15

LLNSWGCKGRLVCYTS

or

Leu Leu Asn Ser Trp Gly Cys Lys Gly Arg Leu Val Cys Tyr Thr Ser (SEQ ID NO: 10),  
1 5 10 15

ALETLLQNQQLLSWGCRGRLVCYTSSVRWNET

or

Ala Leu Glu Thr Leu Leu Gln Asn Gln Gln Leu Leu Asn Ser Trp Gly Cys Arg Gly  
1 5 10 15  
Arg Leu Val Cys Tyr Thr Ser Val Arg Trp Asn Glu Thr (SEQ ID NO: 11),  
20 25 30

ALETLLQNQQLLNWGCGRGRLVCYTSSVRWNET

or

Ala Leu Glu Thr Leu Leu Gln Asn Gln Gln Leu Leu Asn Ile Trp Gly Cys Arg Gly

1 5 10 15

Arg Leu Val Cys Tyr Thr Ser Val Arg Trp Asn Glu Thr (SEQ ID NO: 12),

20 25 30

ALETLLQNQQLLDLWGCRGRLVCYTSSVRWNET

or

Ala Leu Glu Thr Leu Leu Gln Asn Gln Gln Leu Leu Asp Leu Trp Gly Cys Arg Gly

1 5 10 15

Arg Leu Val Cys Tyr Thr Ser Val Arg Trp Asn Glu Thr (SEQ ID NO: 13),

20 25 30

LNQQRLLNSWGCKGRLVCYTSSV

or

Leu Asn Gln Gln Arg Leu Leu Asn Ser Trp Gly Cys Lys Gly Arg Leu Val Cys Tyr

1 5 10 15

Thr Ser Val (SEQ ID NO: 14),

20

RALETLLNQQRLLNSWGCKGRLVCYTSSV

or

Arg Ala Leu Glu Thr Leu Leu Asn Gln Gln Arg Leu Leu Asn Ser Trp Gly Cys Lys

1 5 10 15

Gly Arg Leu Val Cys Tyr Thr Ser Val (SEQ ID NO: 15),

20 25

RLNSWGCKGRLVCYTSV

or

Arg Leu Asn Ser Trp Gly Cys Lys Gly Arg Leu Val Cys Tyr Thr Ser Val (SEQ ID NO: 16).

1 5 10 15

69. (New) Composition containing at least one synthetic peptide of formula (I) according to claim 66, said peptide being freeze-dried or diluted in water.
70. (New) Composition according to claim 69 containing, as the at least one synthetic peptide of formula (I), SEQ ID NO: 3 and SEQ ID NO: 1.
71. (New) Composition containing at least one synthetic peptide of formula (I) according to claim 66 and at least one group O HIV-1 recombinant peptide.
72. (New) Composition containing at least one synthetic peptide of formula (I) according to claim 66, and at least one HIV-1 and/or HIV-2 recombinant or synthetic peptide.
73. (New) Immunoassay method for detecting a group O HIV-1 infection comprising the steps of
- a) obtaining a sample from a patient likely to contain anti-group O HIV-1 antibodies;
  - b) contacting at least one synthetic peptide of formula (I) according to claim 66, detectably labeled, with said sample;

c) detecting the presence or absence of a complex between said peptides and said antibodies;

d) optionally assaying the amount of said antibodies in the sample; wherein the presence of a complex between said peptides and said antibodies is indicative of a group O HIV-1 infection.

74. (New) Immunoassay method for detecting a group O HIV-1 infection comprising the steps of:

- a) obtaining a sample from a patient likely to contain anti-group O HIV-1 antibodies;
- b) contacting a composition according to claim 69, containing at least one synthetic peptide of formula (I), detectably labeled, with said sample:
- c) detecting the presence or absence of a complex between said peptides and said antibodies;
- and
- d) optionally assaying the amount of said antibodies in the sample;

wherein the presence of a complex between said peptides and said antibodies is indicative of a group O HIV-1 infection.

75. (New) Diagnostic kit for the detection of group O HIV-1 specific antibodies comprising

- a) a first container comprising at least one synthetic peptide of formula (I) according to claim 66 and
- b) a second container comprising appropriate means of detection of complexes between said antibodies and said peptide.

76. (New) Diagnostic kit for the detection of group O HIV-1 specific antibodies comprising



- a) a first container comprising a composition according to claim 69 and
- b) a second container comprising appropriate means of detection of complexes between said antibodies and said peptide.